

Appl. No. 10/617,620  
Reply to Final Office Action dated October 7, 2005

Docket No. RTN-141PUS

### REMARKS

The above-identified patent application has been amended and Applicants respectfully request the Examiner to reconsider and again examine the claims as amended in accordance with the provisions of 37 C.F.R. §1.116.

Applicant respectfully requests reconsideration of the present application in view of the following remarks.

Claims 1-4, 6-9, and 12 – 21 are pending in the application; claims 5, 10, 11 and 22-24 having been cancelled by this amendment. No claims have yet been allowed. Claims 1-24 are rejected. Claims 1-3, 6-9, 12, 13 and 15 are amended herein. No new claims have been added by this amendment.

In accordance with the revised provisions of 37 C.F.R. §1.121(c) as enacted on July 30, 2003, a marked up version of the amended claims is provided above.

The Examiner rejects Claims 1-8, 10-12, 15-17, 19, 22 and 23 under 35U.S.C. §102(b) as being anticipated by U.S. Pat. No. 4,500,887 issued to Nester (hereinafter "Nester").

Claims 5, 10, 11, 22 and 23 have been cancelled by this amendment and thus the rejection thereof is now moot and will not be discussed.

With respect to Claim 1, Applicants have amended Claim 1 by incorporating the limitations of Claim 10 into Claim 1. Applicants have also amended Claim 1 use the term "notch radiator" which is the term used to describe the structure which was described in the claims as originally filed. This particular change in terminology (i.e. use of the term "notch radiator") was made for reasons of clarity and not to overcome and prior art rejections. Applicants have also made certain changes in Claim 1 to address any potential formalities (e.g. antecedent basis) in the claim due to the inclusion of the limitations of Claim 10 into Claim 1.

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The structure recited in Claim 1 defines a dual polarized antenna element which has coincident phase centers for each polarization. Coincident phase centers are achieved by feeding the orthogonally disposed notch radiator elements with the "balanced symmetrical feed" recited in Claim 1.

Nester describes a dual polarization antenna. However, the Nester dual polarized antenna does not have phase centers which are coincident in each polarization. This is due to the asymmetry between the vertical and horizontal notch elements in Nester and the asymmetry in the antenna feed circuit. Stated differently, the physical arrangement (e.g. the asymmetry) of the vertical and horizontal notch elements in Nester in combination with the Nester feed structure make it impossible for Nester system to as have coincident phase centers.

Thus, Applicants submit that Claim 1 is patentably distinct over the cited Nester reference.

Claims 2-4, 6-8 and 12 each depend either directly or indirectly from Claim 1 and thus include the limitations of Claim 1. Thus, Applicants submit that each of Claims 2-4, 6-8 and 12 are also patentably distinct over Nester.

Applicants respectfully submit that independent Claim 15 is patentably distinct over Nester since Nester neither describes nor suggests an "...antenna comprising ... a cavity plate ... a first plurality of fins disposed on [a] surface of the cavity plate ...said first plurality of fins disposed to receive radio frequency (RF) signals having a first polarization ... a second plurality of fins disposed on the first surface of the cavity plate [and] disposed to receive RF signals having a second polarization, with the second polarization being substantially orthogonal to the first polarization ... and a plurality of balanced symmetrical feed circuits disposed on the first surface of said cavity plate wherein ... feed lines from the balanced symmetrical feed circuits are coupled to the first and second plurality of fins such that the first and second plurality of fins are provided having coincident phase centers..." as called for in Claim 15.

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Claims 16, 17 and 19 each depend either directly or indirectly from Claim 15 and thus include the limitations of Claim 15. Thus, each of Claims 16, 17 and 19 are also patentably distinct over Nester.

The Examiner rejects Claims 9, 13, 14, 18, 20, 21 and 24 under 35U.S.C. §103(a) as being obvious in view of U.S. Pat. No. 4,500,887 ("Nester").

Claim 24 has been cancelled by this amendment and thus the rejection thereof is now moot and will not be discussed.

Claims 9, 13, 14 each include the limitations of Claim 1. Thus, each of claims 9, 13, 14 define a dual polarized antenna which has coincident phase centers for each polarization. As discussed above, Nester does not describe such a structure. Moreover, Nester does not suggest such a structure nor does Nester suggest or allude to the benefits or desirability of having a structure which results in a dual polarized antenna having coincident phase centers for each polarization. Applicants thus submit that Claims 9, 13, 14 are patentable over Nester.

Claims 18, 20, 21 each include the limitations of Claim 15. Thus, each of claims 18, 20, 21 define a structure which results in a dual polarized antenna having phase centers which are coincident for each polarization. As discussed above, Nester does not describe such a structure. Moreover, Nester neither suggests such a structure nor mentions nor even alludes to the benefits or desirability of having a structure which results in a dual polarized antenna having coincident phase centers for each polarization. Applicants thus submit that Claims 18, 20, 21 are patentable over Nester.

In view of the above amendments and remarks, Applicants submit that Claims 1-4, 6-9, and 12 - 21 are in condition for allowance and should be sent to issue and such action is respectfully requested.

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Entry of this amendment is respectfully requested since it places this case in condition for allowance or in better form for appeal by materially reducing the number of issues on appeal.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Amendment or this application.

Applicant does not acquiesce to any assertion made by the Examiner that is not specifically addressed herein.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845.

Dated: 7 Dec 05

Respectfully submitted,

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